CEOS/IDN NEWSLETTER

WGISS-36

Frascati, Italy

Frascati is a town and commune in the province of Rome in the Lazio region of central Italy. It is located 20 kilometers (12 mi) south-east of Rome, on the Alban Hills close to the ancient city of Tusculum. The town is renowned for its white wine, Frascati. Every weekend the area will fill with people searching for a change of pace, clean air, good food and wine. Often groups of Romans will drive here just for the evening, dining at one of the many informal restaurants which serve rich regional specialties and the local white wine. Frascati is famous for its notable villas, which were built from the 16th century onwards by Popes, Cardinals and Roman Nobles as "status symbols" of Roman aristocracy. These country houses were designed for social activities rather than farming. The villas are substantially well preserved, or have been carefully and authentically restored following damage during World War II.

Frascati is an important historical and artistic center. Each year young people from Frascati and the other four towns compete against one another in the Twin Towns Sports Competition, which is hosted in turn by each of the five towns. The town is also closely associated with science, being the location of several international scientific laboratories. During the latter half of the 1950s, the first Italian particle accelerator was developed by INFN, (National Institute for Nuclear Physics), and the INFN still has a major particle physics laboratory in the town. Earth Observation missions of the European Space Agency (ESA), are based in ESRIN (European Space Research Institute). Research facilities of ENEA (National agency for new technologies, Energy and sustainable economic development), The Spaceguard Foundation and The Frascati Tokamak Upgrade are based herein Frascati. The OECD's Frascati Manual, a document setting forth the methodology for collecting statistics about research and development, originated from a meeting at the Villa Falconieri in June 1963.

Credit: Wikipedia http://en.wikipedia.org/wiki/Frascati

Intro to ESA

By: Michael Morahan, IDN Coordinator

"The European Space Agency (ESA) is Europe's gateway to space. Its mission is to shape the development of Europe's space capability and ensure that investment in space continues to deliver benefits to the citizens of Europe and the world."

Current Members: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland and the United Kingdom. Cooperation agreement: Canada
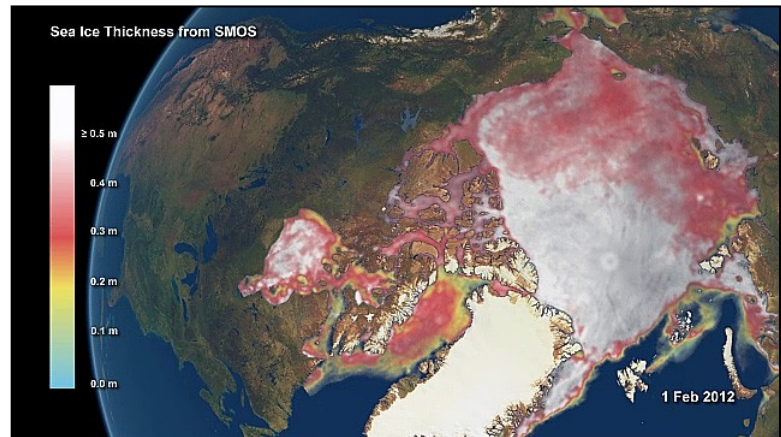
CryoSat-2 image

ESA's Milestones:

1975 - ESA is created in its current form, with 10 founding members: Belgium, Germany, Denmark, France, United Kingdom, Italy, the Netherlands, Sweden, Switzerland and Spain. Ireland joins later in the year.

1975 - ESA launches its first major scientific mission, Cos-B, a satellite monitoring gamma-ray emissions in the Universe.

1983 - Ulf Merbold from Germany becomes first ESA astronaut to fly into space.

1990s - SOHO, Ulysses and the Hubble Space Telescope all jointly carried out with NASA.

2003 - Mars Express orbiter and its lander, Beagle 2, launched.

2005 - The ESA Huygens probe lands on the surface of Titan, Saturn's largest moon.

2010 - Europe's first mission dedicated to studying the Earth's ice cover, CryoSat-2, launched.

European Space Agency (ESA) locations:

- ESA's headquarters, Paris, France - policies and programs are decided.

- EAC, the European Astronauts Centre in Cologne, Germany;
- ESAC, the European Space Astronomy Centre, in Villanueva de la Canada, Madrid, Spain;
- ESOC, the European Space Operations Centre in Darmstadt, Germany;
- ESRIN, the ESA centre for Earth Observation, in Frascati, near Rome, Italy;
- ESTEC, the European Space Research and Technology Centre, Noordwijk, the Netherlands.
- ECSAT – European Centre for Space Applications and Telecommunications (ECSAT), Harwell, Oxfordshire, United Kingdom

ESA also has liaison offices in Belgium, USA and Russia; a launch base in French Guiana and ground/tracking stations in various parts of the world.

Credit: Welcome to ESA, http://www.esa.int/About_Us/Welcome_to_ESA/What_is_ESA

Images courtesy of ESA

Ariane-5 ECA launch

Continued Collaborations at the Summer Meeting of the Federation of Earth Science Information Partners (ESIP)

By: Tyler Stevens, GCMD/IDN Data Services (SERF) Coordinator

GCMD/IDN staff members Tyler Stevens (Data Services Coordinator) and Thomas Cherry (Lead Software Developer) attended the summer ESIP meeting in Chapel Hill, NC, July 9-12, 2013. At a time when the GCMD/IDN is developing web service API's to help advance and facilitate Earth science data and service discovery, having both a technical and scientific knowledge exchange at the meeting was useful. The theme of the meeting was *"Building the Value Chain for Earth Science Data and Information in Disaster Planning, Response, Management, and Awareness".* Approximately 200 people attended
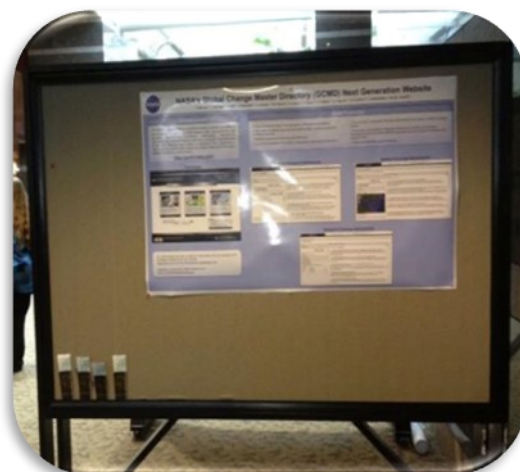
GCMD Poster

Highlights of GCMD/IDN Activities:

- Presented a poster titled "NASA's Global Change Master Directory (GCMD) Next Generation Website". The poster provided an overview of the new website and search functionality.
- Demonstrated the GCMD web interface and web service API's. The Metadata Web Service (MWS) and the Keyword Management System (KMS) are RESTFul web services that provide machine-to-machine capabilities.
- Co-led a presentation and discussion on the Metadata Architecture Study (MAS). GCMD/IDN staff are team members in an NASA ESDIS led study to unify EOSDIS metadata models and systems.
- Participated in a discussion on the use of DOI's in the Earth science community. The Earth science community is exploring ways to use DOI's to facilitate Earth science data discovery.

Other Highlights:

- Workshop on data/metadata stewardship regarding development of use cases for the different components of the data management lifecycle, including the importance of creating quality use and discovery level metadata. (Session Lead: Curt Tilmes, NASA)
- Discussion on dataset discovery using new developments within schema.org, whose purpose is to have a federated discovery across many organizations (Session Lead: Peter Fox, RPI).
- Afternoon session at the North Carolina Museum of Natural Sciences, which included science presentations and demonstrations in the Daily Planet, a unique multi-story theater.

GCMD/IDN Version 9.9.1 Software Release
(2013-08-08)

By: Scott Ritz, GCMD/IDN Science Team Leader

The GCMD/IDN team is pleased to announce the release of GCMD/IDN System, Version 9.9.1. This release incorporates improvements to the back-end of the GCMD system, in addition to several new front-end features. These include the implementation of caching to improve the performance of the Keyword Management Service (KMS) and the Metadata Web Service (MWS) RESTful APIs. Acting as the drivers of the GCMD search interfaces, the APIs are critical in delivering sophisticated query refinements with rapid responses. The new front-end features include: (1) Hyperlinked Data Set Digital Object Identifiers (DOIs), (2) ISO-19115 Formatted Data Set Metadata View, (3) "ISO-19115 to DIF" Metadata Translator, (4) Bulk Metadata Uploader, (5) Open Search Tags.

Major Features of 9.9.1:

Performance Improvements to RESTful APIs

The performance of the KMS and MWS APIs has been improved using caching techniques. Users of the APIs and the GCMD search interfaces will notice improvements in the speed of keyword concept and metadata record returns. Dynamic access (See 1a) to the MWS and KMS APIs is available using an EOS-DIS User Account (See 1b) (http://gcmd.nasa.gov/r/u/urs). Access to keywords without authentication is available from the static keyword service (See 2a).

1. Dynamic API Documentation and Access
    a. http://gcmd.nasa.gov/Connect/
    b. http://gcmd.nasa.gov/r/u/urs
2. Static Keyword Service
    a. http://gcmdservices.gsfc.nasa.gov/static/kms/

Hyperlinked "Data Set Digital Object Identifiers", (DOIs)

Digital Object Identifiers (DOIs) populated in the DIF "Data Set Citation" are now hyperlinked and will be resolved using http://dx.doi.org/. The instances in which a DOI is hyperlinked and resolved are DOIs that begin with:

- doi: (Example: doi:10.1016/j.asr.2005.05.125)
- http://dx.doi.org (Example: http://dx.doi.org/10.4225/15/514A98FB215B1)
- 10:XXXX (Example: 10.5067/MODIS/MODAODHD.051)
- DOI: (Example: DOI: 10.1007/s00190-006-0082-4

DOIs that appear in the DIF "Data Set Citation" , without a valid DOI string, will not be hyperlinked. The DIF Writer's guide (http://gcmd.nasa.gov/add/difguide/data_set_citation.html) has been updated to provide additional usage information and sample DOIs.

ISO-19115 Formatted Data Set Metadata View

The GCMD/IDN DIF display now offers users the option to view data set descriptions in ISO 19115 XML format. To view the DIF in ISO-19115 format, select "Reformat as ISO 19115 document" at the bottom of the DIF display. To return to the default DIF display, use the "Back" button, which can be found at the top of the display window.

View "Reformat as ISO 19115 document" at the bottom of this record:
http://gcmd.nasa.gov/r/d/LC02_FOREST_FLAMMABILITY_ACRE

ISO-19115 to DIF Metadata Translator

GCMD/IDN providers may now submit metadata to the system in ISO-19115 metadata format. This new tool translates sets of multiple metadata records from ISO format to DIF format. Providers who wish to share ISO metadata with the GCMD should email a .zip file of the ISO XML documents to *gsfc-gcmduso@mail.nasa.gov*. While this tool is currently run internally, an online web service will be available in the future.

Bulk Metadata Uploader

GCMD/IDN providers may now upload sets of multiple metadata records to the GCMD metadata queue via a Bulk Metadata Uploader tool. The tool has the capability to validate records and send an email to the provider detailing problem areas. This tool will be released internally for one month while it undergoes NASA security vetting. NASA EOSDIS providers, who wish to test the new tool, now should send an e-mail to *gsfc-gcmduso@mail.nasa.gov*.

* There is a known issue with using the tool in Safari browsers. Disable auto complete or switch to another browser as a temporary workaround. A fix for this will be implemented in an upcoming patch release.

"Open Search" Tags

"Open Search" tags were added to the GCMD, IDN Data, and IDN Services portal allowing users to add a custom search site from their browser. In Firefox, a user can add "Global Change Master Directory" or "CEOS" using the "Manage Search Engine" feature. OpenSearch assists search engines and search clients in communicating by introducing a common set of formats to perform search requests and syndicate search results. For more information about OpenSearch, see http://www.opensearch.org.

"Bug" Fixes/Enhancements

- Repaired a bug in the docBUILDER Science Keyword pick list, where the user could not see the full keyword hierarchy.
- Modified metadata view to keep the "Extended Metadata" field's properties field closed by default.
- Modified metadata display results text when a query returns "no records are found" in the keyword search.
- Repaired a bug where the "Temporal Coverage" subfield in docBUILDER no longer accepted hyphens when metadata authors add a date.
- Repaired a bug in the "Advanced Free-Text" search interface, where choosing the enter key did not initiate the search.

Please contact *gsfc-gcmduso@mail.nasa.gov* with questions or feedback.

New Employee

By: Maurice Gonsalves, GCMD/IDN Developer

Maurice plays a 'Software Developer' role in the GCMD (Global Change Master Directory) team where he develops software from science requirements. Maintains existing Java programs and develops test cases and test plans. He has been working on to improve KMS Caching, and the fixes go into release 9.9.1. Previously, he developed Interfaces using SAP's ERP package ('Warehouse Management' and 'Sales and Distribution') in the Distribution Industry.

Maurice grew up in the DC metro area where he graduated from High School (Woodrow Wilson). After graduating from college with a Bachelor Degree in Electrical Engineering, Maurice started his career working as a RF Engineer and travelled across most of the Southeast and Northeast states building cellular network.

Maurice lived in Virginia Beach and Delaware area before moving back to Maryland. He has travelled to overseas countries such as, Greece, Bangkok, England, Costa Rica and Mexico.